

Notice of Allowability

Application No.

10/526,408

Examiner

Johnnie L. Smith II

Applicant(s)

LIVI, STEFANO A

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 03/02/2005.
2. ☒ The allowed claim(s) is/are 1-11 and 13-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0302
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


KIET T. NGUYEN
PRIMARY EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Benjamin Roca on 06/08/2006.

The application has been amended as follows:

Claim 11: A method for determining an ion mass-per-charge ratio comprises the steps of: (a) directing a ion beam along an axis extending in an initial direction; (b) providing a plurality of curved electrodes extending along an arc of a circle to define a dispersing region therebetween and creating a rotating electric field impressed upon selectively applying a dispersing voltage at a desired frequency to the plurality of curved electrodes; (c) electromagnetically deflecting the ion beam from the axis along a second axis transverse to the first axis while dispersing the ion beam; and (d) detecting with a circular position-sensitive detector intercepting the ion beam characteristics of individual ions of the ion beam.

Claim 12: canceled.

Claim 13: The method of claim [12] 11, wherein the step (a) includes directing a neutral gas flow transversely to the first axis, ionizing particles contained in the neutral gas flow by an ionization source located upstream from the plurality of curved electrodes, collimating the ionized particles forming the beam while applying an acceleration voltage to a grid positioned between the ionization source and the plurality of curved electrodes.

Claim 16: The method of claim [12] 11, further comprising the step of reflecting the ion beam prior to detecting the characteristics of the ions by the position-sensitive detector along a reverse path extending in a direction opposite to the initial direction and spaced laterally from the first axis to avoid impinging upon the plurality of dispersing electrodes.

Allowable Subject Matter

1. Claims 1-11 and 13-20 are allowed.
2. The following is an examiner's statement of reasons for allowance: the prior art searched and cited failed to teach or fairly suggest a mass spectrometer for identifying mass and velocity distributions in a continuous ion beam having a plurality of curved electrodes extending along an arc of a circle and traversed by the continuous ion beam to create a rotating electric field impressed upon and selectively deflecting the continuous ion beam along a second axis extending

transversely to the first axis in combination with the remaining elements of claims 1 and 20. Claims 2-10 are allowable because of their dependencies.

3. The prior art searched and cited failed to teach or fairly suggest a method for determining an ion mass-per-charge ratio having steps of: providing a plurality of curved electrodes extending along an arc of a circle to define a dispersing region therebetween and creating a rotating electric field impressed upon selectively applying a dispersing voltage at a desired frequency to the plurality of curved electrodes; and electromagnetically deflecting the ion beam from the axis along a second axis transverse to the first axis while dispersing the ion beam in combination with the remaining elements of claim 11. Claims 13-18 are allowable because of their dependencies upon claim 11. The prior art searched and cited failed to teach or fairly suggest a mass spectrometer for identifying mass and velocity distributions in a continuous ion beam having: a guide assembly operative to direct the continuous ion beam along a first axis and a dispersive system traversed by the continuous ion beam and operative to create a rotating electric field impressed upon and selectively deflecting the continuous ion beam along a second axis extending transversely to the first axis in combination with the remaining elements of claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All of the references cited on attached PTO 892 contain art similar to that being claimed by applicant.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnnie L. Smith II whose telephone number is 571-272-2481. The examiner can normally be reached on Monday-Thursday 6-4 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Examiner
Art Unit 2881


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